

WHAT IS CLAIMED IS:

Sub a3 1. A method of screening for agonists of an oxysterol activator of LXR $\alpha$  transcription, comprising the steps of:

5 introducing a reporter construct and an LXR expression construct into a host cell;

treating the host cell with potential LXR-specific ligands;  
and

10 identifying compounds which activate LXR $\alpha$  transcription.

2. The method of claim 1, further comprising introducing an RXR expression construct into said host cell.

15 3. The method of claim 1, wherein said LXR expression construct is selected from the group consisting of CMX-LXR, CMX-gal-LXR, RSV-LXR and A5C-LXR.

Sub a4 20 4. The method of claim 1, wherein said host cell is selected from the group consisting of mammalian cells and drosophila cells.

25 5. The method of claim 4, wherein said mammalian cells are selected from the group consisting of CV1, HeLa, HepG2, COS, 293, F9, 3T3.

6. The method of claim 1, wherein said reporter construct is selected from the group consisting of TK-LXRE-LUC, TK-LXRE-CAT, ADH-LXRE-LUC, ADH-LXRE-CAT, TK-gal4<sub>UAS</sub>-LUC and TK-gal4<sub>UAS</sub>-CAT.

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7. The method of claim 1, wherein said means to identify compounds which activate LXR $\alpha$  transcription construct is selected from the group consisting of a luciferase assay, a CAT assay, a beta-galactosidase assay and measuring reporter enzyme levels.

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8. The method of claim 7, wherein measuring reporter enzyme levels is by using a luminometer, a spectrophotometer or thin layer chromatography.

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9. A method of screening for antagonists of an oxysterol activator of LXR $\alpha$  transcription, comprising the steps of:

introducing a reporter construct and an LXR expression construct into a host cell;

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pretreating the host cell with activators of LXR $\alpha$  transcription;

contacting the host cell with potential antagonists of LXR $\alpha$  transcription; and

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identifying compounds which block the activation of LXR $\alpha$  transcription.

10. The method of claim 9, further comprising introducing an RXR expression construct into said host cell.

11. The method of claim 9, wherein said LXR expression  
5 construct is selected from the group consisting of CMX-LXR, CMX-gal-LXR, RSV-LXR and A5C-LXR.

12. The method of claim 9, wherein said host cell is  
selected from the group consisting of mammalian cells and  
10 drosophila cells.

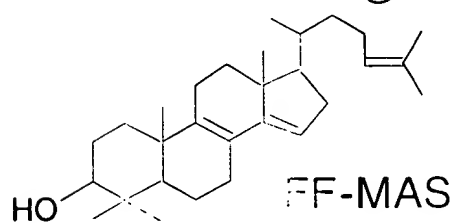
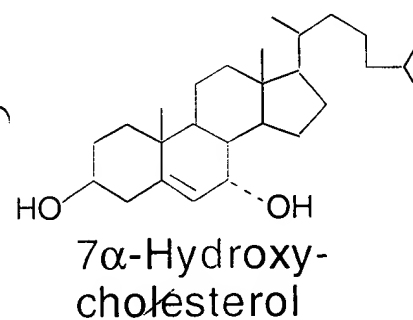
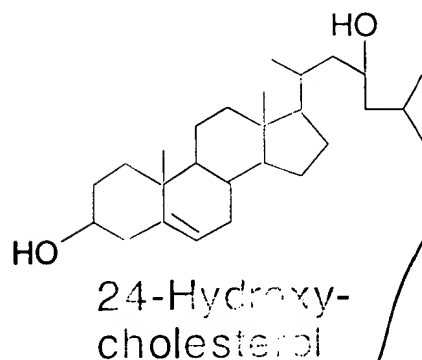
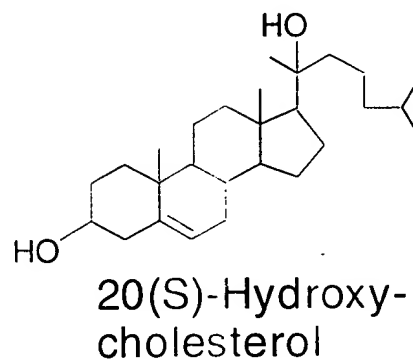
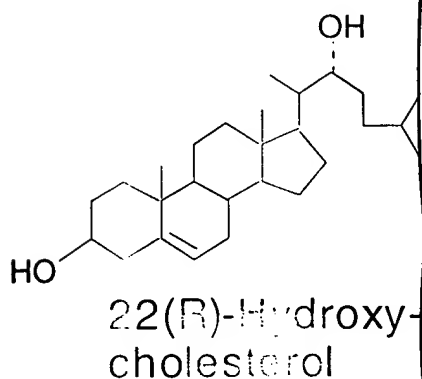
13. The method of claim 12, wherein said mammalian  
cells are selected from the group consisting of CV1, HeLa, HepG2, COS,  
293, F9, 3T3.  
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14. The method of claim 9, wherein said reporter  
construct is selected from the group consisting of TK-LXRE-LUC, TK-  
LXRE-CAT, ADH-LXRE-LUC, ADH-LXRE-CAT, TK-gal4<sub>UAS</sub>-LUC, and TK-  
20 gal4<sub>UAS</sub>-CAT.

15. The method of claim 9, wherein said means to  
identify compounds which block LXR $\alpha$  transcription construct is  
25 selected from the group consisting of a luciferase assay, a CAT assay,  
a beta-galactosidase assay and measuring reporter enzyme levels.

16. A method of enhancing the activation of LXR $\alpha$  transcription in a cell, comprising the step of contacting said cell with a pharmacologically effective dose of an oxysterol, said oxysterol selected from the group consisting of

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